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Evaluation of New Canal Point Sugarcane Clones

1983-84 Harvest Season

ABSTRACT

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Thirty-two new Canal Point (CP) clones of sugarcane (11 in plant cane, 10 in first-ratoon cane, and 11 in second-ratoon cane) were grown in replicated experiments and harvested at 9 locations representing 5 soil series (Terra Ceia muck, Pahokee muck, Lauderhill muck, Torry muck, and Pompano fine sand). The cane and sugar yields of these clones, interspecific hybrids of Saccharum spp., were compared with those of CP 70-1133 in plant-cane and first-ratoon experiments and CP 63-588 in second-ratoon experiments. Each clone was also rated for its reaction to sugarcane smut, Ustilago scitaminea, in separate inoculation tests and by natural infection and for its reaction to sugarcane rust, Puccinia melanocephala, by natural infection. There were no clones superior to CP 70-1133 in the plant-cane experiments. In the first-ratoon experiments, CP 78-1247 was the only clone with a significantly higher yield, in metric tons of sugar per hectare (TS/H), than CP 70-1133. Other promising clones from the first-ratoon experiments were CP 78-1140, CP 78-1156, CP 78-1263, CP 78-1610, CP 78-1628, and CP 78-2114, all of which were not significantly different from CP 70-1133 in yield of TS/H. In the second-ratoon experiments, CP 77-1414 was the only clone with adequate disease resistance for commercial production which had a significantly higher yield of TS/H than CP 63-588. CP 77-1776, a clone which had high yields of sugar (in kilograms) per metric ton of cane (KS/T) in the two previous harvest seasons, was once again significantly higher than CP 63-588 in this characteristic, both at early and regular harvests. However, CP 77-1776 was lower than CP 63-588 in yield estimates of TS/H from early samples and at harvest time.

Keywords: Florida, Lauderhill muck, Pahokee muck, Pompano fine sand, Puccinia melanocephala, Saccharum spp., sugarcane cultivars, sugarcane rust, sugarcane smut, sugarcane varieties, sugarcane yields, sugar yields, Terra Ceia muck, Torry muck, Ustilago scitaminea.

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EVALUATION OF NEW CANAL POINT SUGARCANE CLONES: 1983-84 Harvest Season

By Glaz, B., J. D. Miller, P. Y. P. Tai, J. L. Dean, M. S. Kang, and O. Sosa, Jr. [1]

INTRODUCTION

Clonal selection at precommercial stages is one of the major components involved in the successful production of sugarcane, interspecific hybrids of Saccharum spp. Although production of sugar per unit area is a very important characteristic, it is not the only yield factor upon which sugarcane is evaluated. In addition, analyses are made on the quantity of cane needed to produce a particular sugar yield and on the relative millability of the cane. The time of year and the amount of time during the year that a clone yields its highest amount of sugar per unit area can be very important, since sugarcane harvest seasons are usually long. Sugarcane is also characteristically grown as plant and ratoon crops; thus, clones are evaluated accordingly.

Clones that have the desired agronomic characteristics must also be productive in the presence of major disease, insect, and weed pests. Determination of pest resistance and tolerance can be complicated processes that take several years to complete. The selection team must be careful not to discard clones that could be grown commercially because of sufficient resistance or tolerance to pests, but it must also be careful to discard clones that are too susceptible to pests to be grown commercially.

In recent years in many sugarcane producing regions worldwide, there have been major pest attacks on widely grown commercial clones. It is now generally accepted that sugarcane growing regions need adequate reserves of clones (even though yields of these reserve clones may not be as high as those of the major commercial clones) so that major clones can be quickly replaced if they show susceptibility to a new pest or a new race of an established pest. In Florida, three important commercial clones, CP 72-1210, CL 54-378, and CP 74-2005, are threatened by what are probably at least two new races of sugarcane rust, Puccinia melanocephala H. Syd. & P. Syd.

Each year at Canal Point, approximately 100,000 seedlings are evaluated from crosses made with a diverse germplasm collection, although perhaps one with not a sufficiently diverse cytoplasmic base (Mangelsdorf 1983). The clones reported on herein are receiving their last 3 years of evaluation by us. Each clone that successfully passes the first year of this phase must undergo an additional 3 to 5 years of evaluation by Florida sugarcane industry personnel before a decision is made on whether it will become a commercial clone.

Characteristics of clones that may be valuable for breeding with other clones are identified throughout the selection process. Clones with specific characteristics are sought by sugarcane breeders worldwide. From September 1983 to May 1984, Canal Point clones were sent to Australia, Colombia, France, Iraq, Malaysia, Mauritius, Puerto Rico, and Zimbabwe. Canal Point clones also were sent to Clewiston, Gainesville, and Orlando in Florida and to Louisiana, Maryland, Ohio, and Virginia.

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TEST PROCEDURES

Twenty-three replicated experiments of 32 new Canal Point (CP) clones (11 in plant cane, 10 in first-ratoon cane, and 11 in second-ratoon cane) and the reference clones (CP 63-588 and CP 70-1133) were harvested at 9 growers' farms. CP 70-1133 was the reference clone in plant-cane and first-ratoon experiments and CP 63-588 was the reference clone in second-ratoon experiments. There were plant-cane, first-ratoon, and second-ratoon experiments at each location except Okeelanta, which did not have a second-ratoon experiment; Beardsley Farm, which did not have a plant-cane experiment; and Eastgate Farms, which had only a plant-cane experiment. Ten experiments were conducted on Lauderhill muck. Of these, eight experiments were at A. Duda and Sons' Farm (east of Belle Glade), Gulf and Western Food Products Co. (Okeelanta), and A. F. Saunders, Inc. (south of Clewiston). The other two were second-ratoon experiments at New Farm, Inc. (east of Canal Point), and Wedgworth Farms, Inc. (east of Belle Glade). Four experiments were conducted on Pahokee muck, which is similar to Lauderhill and Terra Ceia muck but deeper than the former and not as deep as the latter (Snyder et al. 1978): plant-cane experiments at New Farm and Wedgworth Farms and plant-cane and first-ratoon experiments at South Florida Industries (near 20 Mile Bend in Palm Beach County). Experiments on Terra Ceia muck consisted of first-ratoon experiments at New Farm and Wedgworth Farms and a second-ratoon experiment at South Florida Industries. Torry muck was the soil for the plant-cane experiment at Eastgate Farms (north of Belle Glade) and two ratoon experiments at Beardsley Farm (near Lake Harbor); and Pompano fine sand, for three experiments at the Lykes Brothers' Farm (near Moorehaven in Glades County).

Selection of each clone for planting in these replicated experiments was based on 5 years of data. Beginning last year, and as reflected by results presented this year for the first-ratoon experiments, we replaced CP 63-588 with CP 70-1133 because it had become the most widely grown commercial clone in Florida (Donovan and Glaz 1983). In each of the 23 experiments, clones were planted with 2 lines of seed cane per furrow in plots of 0.0065 hectare in a randomized complete-block design with 4 replications. Each plot was 10.7 meters long and 6.1 meters wide. The distance between rows was 1.5 meters, and a distance of 1.5 meters separated the end of each plot row and the beginning of the next plot row. The margins of the experiments were buffered to reduce mechanical damage and border effects, but individual four-row plots were not buffered.

Sugarcane management practices, such as fertilizing, cultivating, pest control, burning, loading, and hauling, were the same for each experimental plot as for the commercial field in which the plot was located.

To evaluate early-season sugar production, 10 stalks per plot were randomly sampled from the unburned cane in 2 of the 4 replications at each location between October 17 and 26, 1983. These samples were milled, the crusher juice was analyzed for Brix and sucrose, and the indicated yields of sugar in kilograms per metric ton of cane were determined. To estimate the yield of sugar per hectare from these preharvest data, we assumed that the preharvest yield of cane per hectare was equal to the actual yield of cane per hectare obtained at harvest.

All experiments were harvested between October 30, 1983, and February 27, 1984. However, 19 of the 23 experiments were harvested in January and February 1984. The ranges of harvest dates were as follows: January 3 to February 27, 1984, for plant-cane; December 7, 1983 to February 24, 1984, for first-ratoon cane; and October 30, 1983, to February

12, 1984, for second-ratoon cane. After each plot had been burned, all cane was cut and piled by hand and then weighed with a tractor-mounted weighing device. Fifteen stalks were randomly selected from each plot and transported to the Agricultural Research Service's laboratory at Canal Point for weighing, milling, and crusher-juice analysis.

All values for yield of sugar per metric ton of cane and for yield of sugar per hectare in this report are indicated (theoretical) yields calculated in accordance with a simplification of the Winter-Carp-Geerligs formula (Arceneaux 1935); an explanation of the formula was given previously (Rice and Hebert 1972).

Although the indicated sugar yields reported herein may not be obtained by all sugar factories, they are valid for comparing clones having different milling qualities. Varietal correction factors were used in all the theoretical sugar calculations.

Statistical analyses were done according to McIntosh (1983). F-ratios were chosen according to a mixed model, with treatments (clones) fixed and locations random. The source of variation that corresponded to the error term for the effect being tested was used to calculate the least significant difference (LSD). LSD was used regardless of significance of F-ratios in all analyses. Significant differences were sought at the 10% probability level. LSD values at the 5% probability level are included in the tables for readers who prefer to use that level.

RESULTS AND DISCUSSION

The parentage, variety correction factor, and reactions to smut and rust for each clone included in these experiments are listed in table 1. Tables 2 through 6, 7 through 11, and 12 through 16 contain the results of the plant-cane, first-ratoon, and second-ratoon experiments, respectively.

Plant cane

CP 70-1133 yielded significantly more metric tons of cane per hectare (TC/H) than any other clone except CP 79-1380, CP 79-1697, and CP 79-1540 and significantly more metric tons of sugar per hectare (TS/H) than any other clone except CP 79-1697 (tables 2 and 6). CP 79-1697 was lower, but not significantly, than CP 70-1133 in both of these characteristics. Attempts will be made to use CP 79-1697 in future breeding seasons at Canal Point due to its exotic germplasm; it is a BC_1 with parentage of CP 65-357 x US 72-1151 [Chapina (a typical *Saccharum officinarum*) x US 56-15-8 (*Saccharum spontaneum*)].

First-Ratoon Cane

CP 78-1247 was the only clone which yielded significantly more TS/H than CP 70-1133 (table 11). The TC/H yield of CP 78-1247 was lower, although not significantly, than that of CP 70-1133 (Table 7); and the yield in kilograms of sugar per metric ton of cane (KS/T) of CP 78-1247 was significantly higher than that of CP 70-1133 (table 10). Results for CP 78-1247 were similar in the plant crop (Glaz et al. 1983) except that its TS/H yield was higher, but not significantly, than that of CP 70-1133, and significantly higher than that of any of the other clones. This year, the TS/H yields of CP 78-1628 and CP 78-2114 were not significantly less than the yield for CP 78-1247 (table 11). Stability of CP 78-1247 for KS/T, TC/H, and TS/H in a

previous selection stage was reported to be high (Kang and Miller 1984). Similar results were reported in plant cane of this selection stage last year (Glaz et al. 1983). However, the results for TS/H in the first-ratoon crop reported herein show that CP 78-1247 was outstanding at three locations (New Farm, Inc., Beardsley, and Lykes Bros.), slightly above average at three locations (Okeelanta, Duda, and South Florida Industries), and slightly less than average at one location (Wedgworth) (table 11), which would indicate that its stability was low (table 11).

CP 78-1628 and CP 78-2114 had higher, although not significantly, yields of TS/H than CP 70-1133. Neither of these new clones had a significantly lower TS/H yield than CP 70-1133 in the plant crop (Glaz et al. 1983). This year, both CP 78-1628 and CP 78-2114 had lower yields of TC/H than CP 70-1133, although only CP 78-1628 was significantly lower (table 7). Also, CP 78-1628 had a significantly higher yield of KS/T than CP 78-2114, which had a significantly higher KS/T yield than CP 70-1133 (table 10).

CP 78-1610, CP 78-1140, CP 78-1156, and CP 78-1263 had TS/H yields not significantly less than the yield for CP 70-1133 (table 11). CP 78-1610 had a TC/H yield not significantly less than that of CP 70-1133 and a KS/T yield significantly higher than that of CP 70-1133 (tables 7 and 10). An interesting characteristic of CP 78-1610 was that it ranked second, and was significantly higher than 10 other clones, in preharvest KS/T but was eighth and significantly higher than only 3 clones in normal harvest KS/T (tables 8 and 10). This relatively high KS/T from early samples caused CP 78-1610 to have the highest estimated TS/H yield from early samples (table 9).

CP 78-1140 had a very high yield of TC/H and a very low yield of KS/T (tables 7 and 10). CP 78-1156 and CP 78-1263 both had moderate yields of TC/H and KS/T (tables 7 and 10).

The data for disease susceptibly indicate that all the above-mentioned clones have adequate resistance for commercial production in Florida. CP 78-1628 currently is classified as intermediate in susceptibility to sugarcane smut (table 1).

Second-Ratoon Cane

CP 77-1414 and CP 77-1055 were the only clones that had significantly more TS/H than CP 63-588 (table 16). Both of these clones also had significantly more TC/H than CP 63-588, and CP 77-1414 had significantly more TC/H than any other clone (table 12). However, CP 77-1414 had significantly less KS/T than CP 63-588 and CP 77-1055, both of which were equal in this characteristic (table 15). In these reports summarizing the results of the past two harvest seasons (Glaz et al. 1982 and 1983), it was reported that CP 77-1414 did not meet the minimal commercial variety correction factor (VCF) requirement of 0.96. This is no longer a valid reason for precluding the approval of CP 77-1414 as a commercial clone. As plant cane, CP 77-1414 had a VCF of 0.928. However, all the samples that were used to calculate that VCF were taken from fields which had previously been frozen. As first- and second-ratoon cane, the VCF's of CP 77-1414 were 0.9969 and 1.0169, respectively, which, including the plant-cane VCF, gave CP 77-1414 an average VCF of 0.9773 (table 1). CP 77-1414 has also had excellent resistance to rust and smut (table 1). CP 77-1055 is susceptible to smut and to a lesser degree, rust (table 1), which detracts from its otherwise

good production records from plant cane through second-ratoon cane (Glaz et al. 1982 and 1983).

CP 77-1776 has been included in the Florida Sugar Cane League, Inc., seed increase program due to its high yield of KS/T and moderate yields of TC/H as plant cane and first-ratoon cane (Glaz et al. 1982 and 1983). As second-ratoon cane, CP 77-1776 was once again significantly higher than CP 63-588 in early and harvest KS/T (tables 13 and 15). However, the TC/H of CP 77-1776 was significantly less than that of CP 63-588 (table 12), causing CP 77-1776 to have disappointing estimated yields of TS/H from early samples and at harvest time (tables 14 and 16).

CP 77-1776 is resistant to both smut and rust (table 1).

Results from the plant-cane experiments revealed no new high-yielding clones. However, CP 79-1697 was identified as a potentially important clone for breeding due to its nearly acceptable yields and exotic germplasm.

Combined data of the last 2 years (1983-84) indicated seven promising clones from the first-ratoon experiments: CP 78-1140, CP 78-1156, CP 78-1247, CP 78-1263, CP 78-1610, CP 78-1628, and CP 78-2114. Four of these clones, CP 78-1156, CP 78-1247, CP 78-1628, and CP 78-2114, have been included in the Florida Sugar Cane League, Inc., seed increase program. CP 78-1247 has had higher yields of TS/H than CP 70-1133 as plant cane and first-ratoon cane. CP 78-1628 and CP 78-2114 have had TS/H yields about equal to those of CP 70-1133 in the past 2 years. The other three clones yielded significantly less TS/H than CP 70-1133 in plant cane, but not significantly different TS/H in the first-ratoon crop. Of these, CP 78-1610 may be an acceptable early-maturing clone.

After 3 years of evaluation (1982-84), CP 77-1414 had the highest yields of TS/H in the second-ratoon experiments. However, it had lower than average yields of KS/T. CP 77-1776 has had excellent early and harvest yields of KS/T from plant through second-ratoon crop, but its 3-year total of TS/H was only 92.3% of that of CP 63-588. CP 77-1776 has been included in the Florida Sugar Cane League, Inc. seed increase program.

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Table 1.--Parentage, variety correction factors (VCF)[1] and ratings for smut and rust susceptibility of CP 63-588, CP 70-1133, and 32 new sugarcane clones

Clone	Parentage[2]	VCF	Rating[3]	
			Smut	Rust
CP 63-588	CL 54-191 X CP 57-120	1.0000	R	I
CP 70-1133	[4]67 P 6 CP 56-63	.9890	R	R
CP 77-1008	CP 65-357 x CL 54-1910	.9540	R	S
CP 77-1049	CP 68-1154 x CP 68-1022	.9980	I	R
CP 77-1055	CP 68-1154 x CP 68-1022	.9792	S	I
CP 77-1125	CP 63-588 x CP 56-63	.9700	R	R
CP 77-1148	CP 65-357 x CP 68-1022	.9610	I	R
CP 77-1400	CP 70-1133 x CP 69-1059	.9890	I	R
CP 77-1404	CP 68-1067 x CP 69-1056	.9700	R	R
CP 77-1414	CP 68-1067 x CP 69-1056	.9773	R	R
CP 77-1446	CP 69-1062 x CP 63-306	.9870	S	S
CP 77-1720	CP 68-1154 x CP 63-588	1.0120	S	R
CP 77-1776[5]	CP 68-1067 x CP 68-1022	1.0302	R	R
CP 78-1038	73 P 1 CP 63-588	1.0205	I	R
CP 78-1140	73 P 2 CP 69-1052	.9555	R	R
CP 78-1156[5]	CP 70-1512 x CP 70-1133	.9790	R	R
CP 78-1247[5]	CP 68-1067 x CP 57-614	.9570	R	R
CP 78-1263	CP 68-1067 x CP 57-614	.9815	R	R
CP 78-1599	CP 68-10k67 x CP 68-1022	1.0025	I	R
CP 78-1610	CP 68-1067 x CP 68-1022	.9548	R	R
CP 78-1628[5]	CP 65-357 x CP 68-1026	.9677	I	R
CP 78-1979	CP 70-1512 x CP 68-1026	.9759	I	S
CP 78-2114[5]	Unknown	1.0033	R	R
CP 79-1243	CP 71-1442 x CP 70-1133	.9595	I	S
CP 79-1288	CP 73-1372 x CP 70-1133	.9783	R	R
CP 79-1374	CP 71-1194 x CP 68-1026	.9512	R	R
CP 79-1380	CP 73-1372 x US 75-1337	.9170	I	R
CP 79-1540	CP 70-1547 x CP 70-1133	.9262	R	R
CP 79-1580	CP 73-1225 x CP 72-1370	.9408	R	S
CP 79-1606	CP 71-1273 x CP 69-1052	.9382	R	R
CP 79-1608	CP 71-1273 x CP 69-1052	.9335	R	R
CP 79-1658	CP 70-1547 x CP 63-588	1.0578	R	R
CP 79-1661	CP 70-1547 x CP 63-588	1.0022	R	R
CP 79-1697	CP 65-357 x US 72-1151	.9874	R	R

[1]VCF used to calculate theoretical yield of 96° sugar per metric ton of cane according to Arceneaux's simplification of the Winter-Carp-Geerligs formula.

[2]CL 54-191 and CL 54-1910 developed by the U. S. Sugar Corp., Clewiston, Fla.

[3]R = resistant enough for commercial production; S = too susceptible for commercial production; I = intermediate (the available data not sufficiently persuasive to determine susceptibility).

[4]67 P 6, 6th polycross made in the 1967 crossing season. Female parent (CP 56-63) exposed to pollen from many male varieties; therefore, male parent of CP 70-1133 unknown. Similar explanations for CP 78-1038 and CP 78-1140.

[5]Seed cane currently being increased by Florida Sugar Cane League, Inc., for potential release.

Table 2.--Yields of cane, in metric tons per hectare, from plant cane on Lauderhill, Pahokee, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and harvest date								Average yield, all farms
	Lauderhill muck			Pahokee muck			Torry muck	Pompano fine sand	
	Saunders[1] 1/17/84	Okeelanta 2/5/84	Duda 2/23/84	New Farm, Inc. 1/7/84	South Florida Industries 1/22/84	Wedgworth 2/2/84	Eastgate 2/27/84	Lykes Bros. 11/3/84	
CP 70-1133	[2]57.93	136.85	185.35	113.12	152.46	138.76	153.38	106.86	132.93
CP 79-1380	52.56	130.46	168.60	114.45	131.31	134.91	153.89	115.70	125.24
CP 79-1697	72.98	124.46	158.24	124.63	128.36	136.60	139.15	113.19	124.70
CP 79-1540	71.09	117.59	148.62	120.38	147.23	119.20	149.71	120.65	124.31
CP 79-1608	42.99	117.26	154.55	120.02	133.22	138.92	136.62	86.01	116.20
CP 79-1580	[2]23.49	128.29	143.83	110.65	130.10	130.16	134.24	98.42	115.27
CP 79-1606	38.12	121.45	148.10	103.41	125.13	123.65	120.67	92.48	109.13
CP 79-1661	[2]62.81	85.55	131.45	105.93	107.32	101.63	151.93	108.63	108.33
CP 79-1288	57.65	104.89	130.42	88.78	115.55	125.27	124.84	109.99	107.17
CP 79-1658	84.58	91.73	133.01	89.39	107.11	81.28	120.70	106.52	101.79
CP 79-1374	73.33	77.25	115.38	85.73	105.56	73.47	148.10	110.82	98.71
CP 79-1243	41.88	93.77	123.32	93.59	91.28	98.88	133.42	101.18	97.16
Mean[3]	57.19	110.80	145.07	105.84	122.89	116.89	138.89	105.87	113.37
LSD:									
5% level	30.34	10.01	21.80	12.72	16.01	22.18	14.97	12.04	13.53
10% level	25.22	8.32	18.12	10.57	13.31	18.43	12.44	10.00	11.29
CV[4](%)	36.75	6.26	10.41	8.32	9.02	13.14	7.46	7.87	11.27

[1]Flooded conditions after planting reduced emergence considerably at Saunders.
[2]Average of 3 not 4 replications.
[3]LSD for location means=5.58 t/ha at 10% probability level.
[4]CV=coefficient of variation.

Table 3.--Indicated yields of 96° sugar, in kilograms per metric ton of cane, from preharvest samples of plant cane on Lauderhill, Pahokee, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and sampling date[1]							Average yield, all farms
	Lauderhill muck			Pahokee muck		Torry muck	Pompano fine sand	
	Saunders 10/19/83	Okeelanta 10/20/83	Duda 10/26/83	South Florida Industries 10/24/83	Wedgworth 10/26/83	Eastgate 10/17/83	Lykes Bros. 10/19/83	
CP 79-1658	103.7	104.5	82.5	113.5	112.0	81.4	101.0	99.8
CP 79-1243	100.0	98.5	91.6	100.7	110.0	66.8	116.8	97.8
CP 70-1133	105.6	80.7	84.7	104.8	92.4	101.1	114.6	97.7
CP 79-1288	105.3	92.3	78.3	110.2	99.7	74.3	113.1	96.2
CP 79-1697	97.8	73.7	69.7	110.9	90.5	80.4	98.4	88.8
CP 79-1580	91.1	76.8	88.5	87.8	90.6	69.3	101.3	86.5
CP 79-1606	99.7	89.5	73.2	80.3	90.5	68.4	101.0	86.1
CP 79-1380	86.5	85.4	76.3	87.7	84.8	86.8	94.3	85.9
CP 79-1661	91.6	84.5	75.6	80.4	83.0	71.0	97.4	83.4
CP 79-1374	93.4	80.1	69.6	90.6	78.1	62.8	98.1	81.8
CP 79-1608	86.7	84.2	68.3	80.9	89.1	64.9	91.4	80.8
CP 79-1540	80.5	62.6	67.8	95.9	90.5	74.0	88.3	79.9
Mean[1]	95.2	84.4	77.2	95.3	92.6	74.6	101.3	88.7
LSD:								
5% level	17.6	25.3	18.0	38.7	54.9	47.1	10.4	6.2
10% level	14.3	20.6	14.7	31.5	44.8	38.5	8.5	5.1
CV[2](%)	8.38	13.62	10.59	18.43	26.95	28.71	4.66	14.53

[1]LSD for location means=5.42 kg/t of cane at 10% probability level.
[2]CV=coefficient of variation.

Table 4.--Indicated yields of 96° sugar, in metric tons per hectare, from preharvest samples of plant cane on Lauderhill, Pahokee, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and sampling date[1]							Average yield, all farms
	Lauderhill muck			Pahokee muck		Torry muck	Pompano fine sand	
	Saunders[2] 10/19/83	Okeelanta 10/20/83	Duda 10/26/83	South Florida Industries 10/24/83	Wedgworth 10/26/83	Eastgate 10/17/83	Lykes Bros. 10/19/83	
CP 70-1133.....	3.894	11.081	14.648	16.886	11.074	16.220	12.050	12.265
CP 79-1697.....	5.590	9.258	11.878	14.598	12.629	11.916	10.326	10.885
CP 79-1380.....	4.174	11.696	13.213	11.908	10.845	13.547	11.162	10.734
CP 79-1288.....	6.990	9.489	9.899	12.649	11.771	8.910	11.858	10.224
CP 79-1658.....	8.366	9.973	11.390	11.840	9.618	9.689	10.338	10.173
CP 79-1540.....	4.784	7.600	10.225	14.003	12.018	10.051	11.286	9.995
CP 79-1580.....	1.889	9.841	12.314	11.475	12.265	9.140	9.632	9.508
CP 79-1243.....	3.724	9.711	11.291	9.208	11.928	8.828	11.828	9.502
CP 79-1608.....	3.764	10.017	10.278	11.557	12.616	8.472	7.353	9.151
CP 79-1606.....	4.488	10.911	10.321	9.157	10.881	7.554	9.389	8.957
CP 79-1661.....	4.853	7.904	10.009	8.196	8.726	10.806	10.287	8.683
CP 79-1374.....	7.274	6.513	8.475	9.389	6.083	9.247	10.803	8.255
Mean[3].....	4.983	9.499	11.162	11.739	10.871	10.227	10.526	9.856
LSD:								
5% level.....	5.495	3.383	3.034	4.691	3.676	7.225	1.510	1.818
10% level.....	4.484	2.761	2.476	3.828	2.999	5.895	1.232	1.519
CV[4](%).....	50.11	16.18	12.35	18.15	15.36	32.10	6.52	20.46

[1]Yields based on early sucrose analysis, assuming that early cane yields are equal to actual yields at harvest.
[2]Flooded conditions after planting reduced emergence considerably at Saunders.
[3]LSD for location means=0.956 t/ha at 10% probability level.
[4]CV=coefficient of variation.

Table 5.--Indicated yields of 96° sugar, in kilograms per metric ton of cane, from plant cane on Lauderhill, Pahokee, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and harvest date								Average yield, all farms
	Lauderhill muck			Pahokee muck			Torry muck	Pompano fine sand	
	Saunders 1/17/84	Okeelanta 2/5/84	Duda 2/23/84	New Farm, Inc. 1/7/84	South Florida Industries 1/22/84	Wedgworth 2/2/84	Eastgate 2/27/84	Lykes Bros. 1/3/84	
CP 79-1243	128.8	126.9	114.9	119.3	118.5	116.2	124.5	140.5	123.7
CP 79-1658	120.9	108.0	94.8	123.6	127.3	99.1	123.5	141.4	117.3
CP 79-1288	125.3	106.0	99.7	107.2	121.0	102.4	113.5	139.0	114.2
CP 79-1606	107.2	109.8	103.0	114.4	118.2	98.4	124.8	134.0	113.7
CP 70-1133	110.0	102.0	101.0	101.1	111.5	92.1	115.6	130.5	107.9
CP 79-1580	105.8	99.3	101.6	104.9	107.8	96.9	108.6	123.3	106.0
CP 79-1697	107.0	94.4	89.2	98.4	104.1	100.3	125.8	126.7	105.7
CP 79-1661	108.2	95.7	96.5	97.3	104.4	101.1	116.8	124.4	105.5
CP 79-1374	101.6	101.7	90.8	101.3	110.4	101.0	97.5	124.4	103.6
CP 79-1380	103.2	96.1	84.9	101.5	109.7	94.5	103.0	121.3	101.8
CP 79-1608	96.0	98.3	98.3	94.1	102.2	95.5	111.1	116.8	101.5
CP 79-1540	100.5	97.2	93.6	85.4	102.0	94.1	97.2	117.8	98.5
Mean[1]	109.6	102.9	97.4	104.0	111.4	99.3	113.5	128.3	108.3
LSD:									
5% level	8.1	7.8	11.8	10.3	12.2	10.1	12.7	5.5	5.4
10% level	6.7	6.5	9.8	8.6	10.1	8.4	10.5	4.6	4.5
CV[2](%)	5.10	5.26	8.42	6.88	7.57	7.07	7.73	2.97	6.47

[1]LSD for location means=2.5 kg/t of cane at 10% probability level.
[2]CV=coefficient of variation.

Table 6.--Indicated yields of 96° sugar, in metric tons per hectare, from plant cane on Lauderhill, Pahokee, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and harvest date								Average yield, all farms
	Lauderhill muck			Pahokee muck			Torry muck	Pompano fine sand	
	Saunders[1] 1/17/84	Okeelanta 2/5/84	Duda 2/23/84	New Farm, Inc. 1/7/84	South Florida Industries 1/22/84	Wedgworth 2/2/84	Eastgate 2/27/84	Lykes Bros. 1/3/84	
CP 70-1133	[2]6.302	13.950	18.720	11.425	16.974	12.759	17.750	13.937	14.225
CP 79-1697	7.807	11.776	14.186	12.324	13.413	13.700	17.552	14.319	13.134
CP 79-1380	5.441	12.522	14.287	11.634	14.390	12.788	15.851	14.019	12.616
CP 79-1606	4.025	13.343	15.268	11.841	14.835	12.180	15.097	12.403	12.374
CP 79-1540	7.114	11.429	14.064	10.313	14.995	11.147	14.534	14.227	12.228
CP 79-1580	[2]2.451	12.726	14.608	11.601	14.010	12.604	14.583	12.139	12.143
CP 79-1288	7.210	11.125	12.933	9.513	13.990	12.881	14.148	15.277	12.135
CP 79-1243	5.431	11.891	14.148	11.168	10.841	11.488	16.685	14.204	11.982
CP 79-1658	10.238	9.949	12.589	11.094	13.644	8.040	14.896	15.052	11.938
CP 79-1608	4.181	11.516	15.180	11.258	13.702	13.244	15.174	10.030	11.786
CP 79-1661	[2]6.730	8.132	12.655	10.295	11.159	10.259	17.753	13.516	11.460
CP 79-1374	7.392	7.866	10.457	8.647	11.682	7.403	14.446	13.784	10.210
Mean[3]	6.262	11.352	14.091	10.926	13.636	11.541	15.706	13.576	12.183
LSD:									
5% level	3.203	1.455	2.703	1.818	2.461	2.464	2.665	1.540	1.530
10% level	2.662	1.209	2.246	1.511	2.045	2.047	2.215	1.280	1.278
CV[4](%)	35.43	8.87	13.28	11.52	12.50	14.78	11.75	7.855	13.36

[1]Flooded conditions after planting reduced emergence considerably at Saunders.
[2]Average is of 3 not 4 replications.
[3]LSD for location means=0.598 t/ha at 10% probability level.
[4]CV=coefficient of variation.

Table 7.--Yields of cane, in metric tons per hectare, from first-ratoon cane on Lauderhill, Pahokee, Terra Ceia, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and harvest date								Average yield, all farms
	Lauderhill muck			Pahokee muck	Terra Ceia muck		Torry muck	Pompano fine sand	
	Saunders 1/17/84	Okeelanta 2/16/84	Duda 2/24/84	South Florida Industries 1/21/84	Wedgworth 12/7/83	New Farm, Inc. 1/1/84	Beardsley 2/11/84	Lykes Bros. 1/4/84	
CP 78-1140	109.19	98.15	142.61	137.84	111.79	114.11	147.39	98.99	120.01
CP 70-1133	112.01	100.16	141.02	129.92	105.68	123.83	152.75	89.98	119.42
CP 78-2114		103.09	127.73	117.74	109.73	120.90	137.52	98.36	116.44
CP 78-1247		92.78	118.10	118.06	98.20	123.65	152.52	108.54	115.98
CP 78-1610		104.28	123.46	132.05	97.29	109.94	150.12	90.86	115.43
CP 78-1628	106.48	97.81	123.28	125.74	98.68	118.14	135.15	96.14	112.68
CP 78-1263	98.19	102.81	117.15	130.36	105.14	114.39	126.65	88.80	110.44
CP 78-1156		94.21	112.72	116.94	108.74	99.75	149.05	90.50	110.27
CP 78-1979		86.75	105.12	109.08	89.65	105.18	113.44	88.65	98.70
CP 78-1599		.....	101.27	111.14	99.52	93.46	105.68	73.02	97.35
CP 63-588	73.59	79.17	102.17	114.59	98.55	88.88	115.80	87.24	95.00
CP 78-1038		89.41	111.62	104.40	89.25	88.14	129.81	45.89	94.07
Mean[1]	99.89	95.33	118.85	120.65	101.02	108.36	134.66	88.08	109.10
LSD:									
5% level	12.28	9.95	9.56	14.90	23.61	14.81	16.18	19.30	5.41
10% level	10.05	8.27	7.94	12.38	19.62	12.31	13.44	16.04	4.54
CV[2](%)	7.98	7.07	5.57	8.57	16.18	9.47	8.29	15.18	10.11

[1]LSD for location means=3.71 t/ha at 10% probability level.
[2]CV=coefficient of variation.

Table 8.--Indicated yields of 96° sugar, in kilograms per metric ton of cane, from preharvest samples of first-ratoon cane on Lauderhill, Pahokee, Terra Ceia, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and sampling date								Average yield, all farms
	Lauderhill muck			Pahokee muck	Terra Ceia muck		Torry muck	Pompano fine sand	
	Saunders 10/19/83	Okeelanta 10/20/83	Duda 10/26/83	South Florida Industries 10/24/83	New Farm, Inc. 10/24/83	Wedgworth 10/26/83	Beardsley 10/17/83	Lykes Bros. 10/19/83	
CP 78-1599.....	....	120.1	110.3	116.2	118.6	108.5	124.6	116.4	
CP 78-1610.....	97.3	102.7	110.0	112.7	114.2	96.5	116.8	107.2	
CP 78-1247.....	76.9	123.4	106.3	103.2	101.9	84.8	116.4	101.8	
CP 78-1156.....	91.7	91.5	108.7	98.2	103.3	97.4	108.9	100.0	
CP 78-1038.....	95.9	108.4	110.0	100.2	101.8	58.8	122.0	99.6	
CP 78-2114.....	92.6	87.5	83.8	93.3	98.0	98.9	123.6	96.8	
CP 70-1133.....88.9	93.6	84.0	97.8	85.6	98.3	97.4	125.0	96.3	
CP 78-1263.....93.2	84.3	94.6	96.8	93.8	94.5	73.5	110.5	92.7	
CP 78-1140.....89.0	80.6	101.7	86.2	95.6	87.2	93.4	99.4	91.7	
CP 78-1628.....85.2	88.3	83.9	96.9	96.8	89.3	78.3	109.6	91.1	
CP 63-588.....83.4	94.2	97.0	86.5	87.3	90.1	71.9	107.5	89.7	
CP 78-1979.....	81.4	78.6	83.0	81.6	95.9	70.4	86.7	82.5	
Mean[1].....87.9	88.7	97.8	98.9	97.1	99.4	85.8	112.6	96.7	
LSD:									
5% level...29.7	27.1	25.3	22.1	15.4	21.0	21.0	18.2	7.0	
10% level..22.8	22.1	20.7	18.0	12.6	17.1	17.2	14.9	5.8	
CV[2](%).....12.2	13.9	11.77	10.17	7.21	9.60	11.14	7.36	10.28	

[1]LSD for location means=5.7 kg/t of cane at 10% probability level.
[2]CV=coefficient of variation.

Table 9.--Indicated yields of 96° sugar, in metric tons per hectare, from preharvest samples of first-ratoon cane on Lauderhill, Pahokee, Terra Ceia, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and sampling date[1]								Average yield, all farms
	Lauderhill muck			Pahokee muck	Terra Ceia muck		Torry muck	Pompano fine sand	
	Saunders 10/19/83	Okeelanta 10/20/83	Duda 10/26/83	South Florida Industries 10/24/83	New Farm, Inc. 10/24/83	Wedgworth 10/26/83	Beardsley 10/17/83	Lykes Bros. 10/19/83	
CP 78-1610.....		9.970	12.626	15.101	12.097	11.198	14.498	10.889	12.340
CP 78-1247.....		7.497	15.025	12.691	11.568	10.516	13.351	12.782	11.919
CP 70-1133.....10.200		9.563	11.538	13.509	10.582	10.039	15.911	9.767	11.389
CP 78-1140..... 9.511		8.076	15.455	12.481	10.272	9.207	13.863	9.966	11.104
CP 78-1599.....		.....	11.657	11.242	10.200	11.759	12.435	8.518	10.969
CP 78-2114.....		9.103	11.008	10.118	10.652	10.660	13.358	11.531	10.919
CP 78-1156.....		8.661	10.282	12.479	9.663	10.190	14.082	9.191	10.650
CP 78-1263..... 9.558		7.969	11.164	12.465	11.490	12.255	9.092	10.628	10.578
CP 78-1628..... 9.470		8.240	10.603	12.410	11.070	8.286	10.248	9.705	10.004
CP 78-1038.....		8.391	12.258	11.083	8.984	9.188	7.607	3.349	8.694
CP 63-588..... 6.340		7.138	9.984	10.336	7.493	7.537	7.594	8.074	8.062
CP 78-1979.....		6.926	8.032	9.107	8.000	8.521	7.316	8.025	7.989
Mean[2]..... 9.016		8.517	11.636	11.973	10.172	9.946	11.613	9.369	10.389
LSD:									
5% level... 4.982		3.470	3.667	4.197	2.210	3.315	3.065	2.833	0.871
10% level.. 3.826		2.832	2.992	3.425	1.803	2.706	2.501	2.311	0.727
CV[3](%).....19.91		18.51	14.32	15.93	9.87	15.14	11.99	13.74	14.60

[1]Yields based on early sucrose analysis, assuming that early cane yields are equal to actual yields at harvest.
[2]LSD for location means=1.628 t/ha at 10% probability level.
[3]CV=coefficient of variation.

Table 10.--Indicated yields of 96° sugar, in kilograms per metric ton of cane, from first-ratoon cane on Lauderhill, Pahokee, Terra Ceia, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and harvest date								Average yield, all farms
	Lauderhill muck			Pahokee muck	Terra Ceia muck		Torry muck	Pompano fine sand	
	Saunders 1/17/84	Okeelanta 2/16/84	Duda 2/24/84	South Florida Industries 1/21/84	Wedgworth 12/7/83	New Farm, Inc. 1/1/84	Beardsley 2/11/84	Lykes Bros. 1/4/84	
CP 78-1038.....		136.5	125.5	132.1	107.2	123.3	119.8	139.4	126.3
CP 78-1599.....		.....	117.2	128.8	117.8	119.9	115.4	143.4	123.7
CP 78-1247.....		117.6	114.5	116.5	111.3	120.6	117.6	134.4	118.9
CP 63-588.....113.9		119.8	117.9	113.9	107.7	116.9	111.1	140.7	117.7
CP 78-1628.....115.0		115.6	112.7	113.4	107.4	119.8	115.8	140.0	117.5
CP 78-1156.....		122.0	112.0	116.5	111.2	94.2	112.9	140.4	115.6
CP 78-2114.....		115.1	112.0	109.6	110.0	109.8	105.0	137.0	114.1
CP 78-1610.....		107.2	104.1	112.8	108.7	117.3	111.3	135.2	113.8
CP 78-1263.....112.7		117.4	110.8	114.1	116.1	108.3	98.6	131.1	113.6
CP 70-1133.....105.5		104.9	107.2	104.1	109.2	111.3	108.0	134.0	110.5
CP 78-1140.....105.7		105.5	102.8	104.7	105.3	106.9	108.6	129.6	108.6
CP 78-1979.....		96.9	104.5	102.9	98.7	98.7	92.5	123.2	102.5
Mean[1].....110.6		114.4	111.8	114.1	109.2	112.2	109.7	135.7	115.04
LSD:									
5% level.... 8.8		7.7	11.6	4.3	9.3	14.2	10.6	7.5	3.3
10% level... 7.2		6.4	9.7	3.6	7.8	11.8	8.9	6.3	2.8
CV[2](%)..... 5.18		4.61	7.22	2.66	5.93	8.78	6.73	3.85	5.89

[1]LSD for location means=2.3 kg/t of cane at 10% probability level.
[2]CV=coefficient of variation.

Table 11.--Indicated yields of 96° sugar,· in metric tons per hectare, from first-ratoon cane on Lauderhill, Pahokee, Terra Ceia, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and harvest date								Average yield, all farms
	Lauderhill muck			Pahokee muck	Terra Ceia muck		Torry muck	Pompano fine sand	
	Saunders 1/17/84	Okeelanta 2/16/84	Duda 2/24/84	South Florida Industries 1/21/84	Wedgworth 12/7/83	New Farm, Inc. 1/1/84	Beardsley 2/11/84	Lykes Bros. 1/4/84	
CP 78-1247.....		10.907	13.537	13.782	10.856	14.999	17.953	14.573	13.801
CP 78-1628.....12.243		11.318	13.901	14.279	10.582	14.150	15.629	13.507	13.201
CP 78-2114.....		11.843	14.289	12.878	12.075	13.304	14.480	13.454	13.189
CP 70-1133.....11.839		10.530	15.098	13.492	11.615	13.794	16.474	12.012	13.107
CP 78-1610.....		11.163	12.853	14.888	10.568	12.907	16.732	12.288	13.057
CP 78-1140.....11.539		10.343	14.664	14.445	11.777	12.161	16.089	12.823	12.980
CP 78-1156.....		11.474	12.635	13.625	12.059	9.456	16.865	12.701	12.688
CP 78-1263.....11.034		12.109	12.980	14.896	12.215	12.366	12.511	11.631	12.468
CP 78-1599.....		.....	11.818	14.348	11.721	11.209	12.233	10.560	11.981
CP 78-1038.....		12.213	14.014	13.859	9.551	10.861	15.552	6.329	11.768
CP 63-588..... 8.414		9.485	12.044	13.070	10.501	10.380	12.982	12.264	11.142
CP 78-1979.....		8.415	10.958	11.224	8.854	10.378	10.537	10.921	10.184
Mean[1].....11.014		10.891	13.233	13.732	11.031	12.164	14.836	11.922	12.476
LSD:									
5% level.... 1.404		1.454	1.562	2.231	2.527	2.534	2.788	2.654	0.771
10% level... 1.148		1.208	1.298	1.854	2.100	2.106	2.317	2.206	0.647
CV[2](%)..... 8.27		8.96	8.18	11.52	15.86	14.43	13.15	16.50	12.63

[1]LSD for location means=0.528 t/ha at 10% probability level.
[2]CV=coefficient of variation.

Table 12.--Yields of cane, in metric tons per hectare, from second-ratoon cane on Lauderhill, Terra Ceia, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and harvest date							Average yield, all farms
	Lauderhill muck				Terra Ceia muck	Torry muck	Pompano fine sand	
	New Farm, Inc. 10/30/83	Duda 11/14/83	Wedgworth 12/7/83	Saunders 1/18/84	South Florida Industries 1/20/84	Beardsley 2/12/84	Lykes Bros. 1/2/84	
CP 77-1414	87.62	122.85	123.46	87.59	133.85	131.08	104.73	113.03
CP 77-1055	66.11	99.49	104.61	61.35	114.20	150.01	97.25	99.00
CP 77-1008	59.73	83.70	93.33	81.52	101.38	126.20	88.85	90.67
CP 77-1125	68.91	95.56	85.68	76.87	115.48	136.16	36.52	87.88
CP 77-1404	62.85	87.06	73.70	57.45	93.14	157.34	73.61	86.45
CP 77-1148	51.86	96.92	100.12	61.13	110.70	89.96	71.44	83.16
CP 63-588	39.26	69.05	64.30	59.77	95.78	158.45	85.91	81.79
CP 77-1049	60.51	64.82	80.37	76.99	73.16	120.80	64.61	77.32
CP 77-1720	49.19	56.96	62.22	62.85	102.63	78.98	99.59	73.20
CP 77-1446	46.19	87.31	92.58	59.78	85.46	51.95	86.16	72.78
CP 77-1776	51.20	70.83	74.60	50.15	[1]72.56	94.59	70.96	69.27
CP 77-1400	33.99	67.55	80.27	48.00	80.04	98.09	63.82	67.40
Mean[1]	56.45	83.51	86.27	65.28	98.20	116.13	78.62	83.49
LSD:								
5% level	23.40	13.09	16.38	20.48	21.04	21.83	16.13	6.15
10% level	19.45	10.88	13.61	17.02	17.49	17.86	13.40	5.14
CV[2](%)	28.71	10.85	13.15	21.73	14.84	12.93	14.20	15.93

[1]LSD for location means=7.27 t/ha at 10% probability level.
[2]CV=coefficient of variation.

Table 13.--Indicated yields of 96° sugar, in kilograms per metric ton of cane, from preharvest samples of second-ratoon cane on Lauderhill, Terra Ceia, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and sampling date							Average yield, all farms
	Lauderhill muck				Terra Ceia muck	Torry muck	Pompano fine sand	
	Saunders 10/19/83	New Farm, Inc. 10/24/83	Duda 10/26/83	Wedgworth 10/26/83	South Florida Industries 10/24/83	Beardsley 10/17/83	Lykes Bros. 10/19/83	
CP 77-1776.....	95.4	112.3	107.7	121.8	120.5	86.9	138.1	111.8
CP 77-1049.....	111.9	99.2	115.5	102.0	123.2	87.4	121.6	108.7
CP 77-1148.....	99.7	100.8	109.6	94.2	122.9	91.7	132.7	107.4
CP 77-1055.....	90.1	92.7	120.0	107.8	105.1	87.8	125.7	104.2
CP 77-1400.....	105.8	111.1	99.4	107.8	99.2	90.7	112.2	103.7
CP 77-1404.....	94.6	95.1	121.4	102.3	98.1	98.1	111.1	103.0
CP 77-1446.....	100.1	112.1	106.2	86.4	112.6	94.8	108.5	102.9
CP 77-1720.....	99.3	91.3	105.1	103.9	108.1	78.1	105.0	98.7
CP 77-1125.....	101.7	104.0	93.8	110.5	90.3	78.4	122.2	100.1
CP 63-588	88.5	94.5	88.6	100.0	104.0	90.8	126.2	98.9
CP 77-1414.....	89.9	98.5	103.7	108.1	100.3	73.9	108.4	97.5
CP 77-1008.....	68.1	91.0	94.5	101.3	96.2	86.8	104.0	91.7
Mean[1].....	95.4	100.2	105.5	103.8	106.7	87.1	118.0	102.4
LSD:								
5% level.....	20.5	28.9	33.2	30.5	13.5	25.9	28.2	9.4
10% level.....	16.8	23.6	29.9	24.9	11.0	21.2	23.0	7.8
CV[2](%).....	9.78	8.69	15.76	13.36	5.73	13.47	10.85	12.06

[1]LSD for location means=10.75 kg/t of cane at 10% probability level.
[2]CV=coefficient of variation.

Table 14.--Indicated yields of 96° sugar, in metric tons per hectare, from preharvest samples of second-ratoon cane on Lauderhill, Terra Ceia, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and sampling date[1]							Average yield, all farms
	Lauderhill muck				Terra Ceia muck	Torry muck	Pompano fine sand	
	Saunders 10/19/83	New Farm, Inc. 10/24/83	Duda 10/26/83	Wedgworth 10/26/83	South Florida Industries 10/24/83	Beardsley 10/17/83	Lykes Bros. 10/19/83	
CP 77-1414.....	7.700	10.821	12.849	13.430	13.135	9.778	11.145	11.265
CP 77-1055.....	6.747	5.576	12.392	11.510	10.983	12.797	11.449	10.207
CP 77-1148.....	6.365	4.363	10.863	8.998	11.900	8.909	10.231	8.804
CP 77-1404.....	5.823	6.894	10.040	6.923	8.889	14.668	6.555	8.542
CP 77-1125.....	8.270	7.990	8.875	9.171	10.139	11.115	4.228	8.541
CP 77-1049.....	9.441	6.791	8.902	7.742	9.351	10.176	6.541	8.420
CP 77-1008.....	4.801	6.899	7.939	9.342	10.046	10.259	8.573	8.266
CP 63-588.....	5.218	3.587	6.411	6.423	10.131	14.202	9.945	7.988
CP 77-1776.....	4.522	6.040	8.166	8.697	7.154	8.835	9.071	7.498
CP 77-1446.....	5.843	5.271	8.509	7.798	9.559	5.782	8.859	7.375
CP 77-1720.....	6.960	5.927	6.085	5.285	10.820	3.774	10.238	7.013
CP 77-1400.....	4.655	3.594	7.089	7.957	7.178	9.561	7.843	6.840
Mean[2].....	6.362	6.146	9.010	8.606	9.941	9.988	8.723	8.396
LSD:								
5% level.....	2.757	3.267	3.225	4.243	3.443	4.105	3.483	1.971
10% level.....	2.093	2.666	2.632	3.462	2.809	3.539	2.842	1.647
CV[3](%).....	19.69	24.15	16.26	22.40	15.73	17.96	18.14	18.98

[1]Yields based on early sucrose analysis, assuming that early cane yields are equal to actual yields at harvest.
[2]LSD for locations means=1.774 t/ha at 10% probability level.
[3]CV=coefficient of variation.

Table 15.--Indicated yields of 96° sugar, in kilograms per metric ton of cane, from second-ratoon cane on Lauderhill, Terra Ceia, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and harvest date							Average yield, all farms
	Lauderhill muck				Terra Ceia muck	Torry muck	Pompano fine sand	
	New Farm, Inc.[1] 10/30/83	Duda 11/14/83	Wedgworth 12/7/83	Saunders 1/18/84	South Florida Industries 1/20/84	Beardsley 2/12/84	Lykes Bros. 1/2/84	
CP 77-1776	104.2	122.5	134.6	110.0	129.6	113.0	147.4	123.1
CP 77-1049	104.4	121.8	128.5	128.2	129.8	94.4	147.1	122.0
CP 77-1720	98.5	120.0	124.7	117.6	125.3	125.2	138.5	121.3
CP 63-588	94.6	111.7	116.9	115.8	121.2	107.9	141.1	115.6
CP 77-1055	104.2	116.0	119.4	108.0	120.8	103.7	136.8	115.6
CP 77-1400	100.8	112.2	118.3	109.9	115.5	101.2	138.7	113.8
CP 77-1148	100.0	105.1	111.0	109.6	124.0	106.5	136.0	113.2
CP 77-1125	94.0	103.5	113.1	122.3	120.6	102.3	130.2	112.3
CP 77-1404	94.5	107.4	112.5	111.7	113.7	112.6	132.5	112.1
CP 77-1446	109.7	109.8	121.2	104.6	104.4	91.6	126.8	109.7
CP 77-1414	98.0	108.0	109.5	104.6	114.3	103.5	122.8	108.7
CP 77-1008	86.6	98.5	116.6	99.3	107.8	96.4	123.8	104.2
Mean[2]	99.1	111.4	118.9	111.8	118.9	104.8	135.1	114.3
LSD:								
5% level	12.4	9.6	11.5	7.0	10.9	11.4	6.3	6.1
10% level	10.3	8.0	9.6	5.8	9.1	9.5	5.3	5.2
CV[3](%)	8.69	5.99	6.16	4.34	6.36	7.57	3.24	6.05

[1]Polado applied before harvest.
[2]LSD for location means=2.5 kg/t of cane at 10% probability level.
[3]CV=coefficient of variation.

Table 16.--Indicated yields of 96° sugar, in metric tons per hectare, from second-ratoon cane on Lauderhill, Terra Ceia, and Torry muck and on Pompano fine sand

Clone	Average yield by soil series, farm, and harvest date							Average yield, all farms
	Lauderhill muck				Terra Ceia muck	Torry muck	Pompano fine sand	
	New Farm, Inc. 10/30/83	Duda 11/14/83	Wedgworth 12/7/83	Saunders 1/18/84	South Florida Industries 1/20/84	Beardsley 2/12/84	Lykes Bros. 1/2/84	
CP 77-1414.....	8.684	13.254	13.535	9.165	15.341	13.579	12.883	12.349
CP 77-1055.....	6.863	11.538	12.505	6.597	13.819	15.531	13.340	11.456
CP 77-1404.....	5.954	9.376	8.285	6.425	10.592	17.688	9.745	9.724
CP 77-1125.....	6.410	9.888	9.714	9.381	13.942	13.767	4.753	9.694
CP 77-1008.....	5.166	8.268	10.888	8.120	10.936	12.140	11.028	9.507
CP 63-588.....	3.691	7.739	7.406	6.843	11.614	17.105	12.111	9.501
CP 77-1148.....	5.235	10.201	11.119	6.714	13.772	9.618	9.732	9.484
CP 77-1049.....	6.571	7.886	10.327	9.825	9.512	11.459	9.562	9.306
CP 77-1720.....	4.774	6.850	7.798	7.381	12.935	9.864	13.793	9.056
CP 77-1776.....	5.230	8.728	10.043	5.442	[1]9.422	10.652	10.479	8.570
CP 77-1446.....	4.978	9.565	11.214	6.210	8.873	4.783	10.933	8.080
CP 77-1400.....	3.481	7.594	9.515	5.306	9.252	9.903	8.819	7.696
Mean[1].....	5.586	9.241	10.196	7.284	11.668	12.174	10.603	9.536
LSD:								
5% level.....	3.081	1.754	2.199	2.200	3.067	3.211	2.614	2.104
10% level.....	2.563	1.459	1.830	1.830	2.551	2.671	2.175	1.785
CV[2](%).....	31.11	13.16	14.65	20.94	18.22	14.52	15.11	17.41

[1]LSD for location means=0.867 t/ha at 10% probability level.
[2]CV=coefficient of variation.

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